CLEAN COPY OF PENDING CLAIMS (UNOFFICIAL)

1.   A method for detecting pregnancy in a bovine animal comprising:

    (a)   obtaining a sample from said animal; and

    (b)   contacting said sample with an antibody that binds immunologically to at least one pregnancy associated antigen (PAG), wherein said PAG is present in early pregnancy and absent at about two months post-partum; and

    (c)   detecting said PAG bound to said antibody;

whereby the presence of said PAG in said sample indicates that said animal is pregnant.

2.   The method of claim 1, wherein said PAG is selected from the group consisting of PAG2, PAG4, PAG5, PAG6, PAG7 and PAG9.

3.   The method of claim 1, wherein said sample is saliva, serum, blood, milk or urine.

4.   The method of claim 3, wherein said sample is saliva.

5.   The method of claim 3, wherein said sample is serum.

6.   The method of claim 3, wherein said sample is blood.

7.   The method of claim 3, wherein said sample is milk.

8.   The method of claim 3, wherein said sample is urine.

10.   The method of claim 1, wherein said detection comprises detection of bovine PAG (BoPAG) 2, BoPAG4, BoPAG5, BoPAG6, BoPAG7, BoPAG9, BoPAG 7v; BoPAG9v; BoPAG 15; BoPAG 16; BoPAG 17; BoPAG 18; BoPAG 19; BoPAG 20 or BoPAG 21 with polyclonal antisera.

11.   The method of claim 11, wherein said detection comprises detection of bovine PAG (BoPAG) 2, BoPAG4, BoPAG5, BoPAG6, BoPAG7, BoPAG9, BoPAG 7v; BoPAG9v; BoPAG 15; BoPAG 16; BoPAG 17; BoPAG 18; BoPAG 19; BoPAG 20 or BoPAG 21 with a monoclonal antibody preparation.

12.   The method of claim 1, wherein said detection comprises ELISA.

13.   The method of claim 1, wherein said detection comprises RIA.

14.   The method of claim 1, wherein said detection comprises Western blot.

30.   The method of claim 1, further comprising detecting a second PAG in said sample.

31.   The method of claim 30, further comprising detecting a third PAG in said sample.

32.   The method of claim 12, wherein said ELISA is a sandwich ELISA comprising binding of a PAG to a first antibody preparation fixed to a substrate and a second antibody preparation labeled with an enzyme.

33.   The method of claim 32, wherein said enzyme is alkaline phosphatase or horseradish peroxidase.

34.   The method of claim 32, wherein said first antibody preparation is monoclonal.

182.   The method of claim 10, wherein BoPAG 2 has the sequence of SEQ ID NO:25, BoPAG4 has the sequence of SEQ ID NO:27, BoPAG5 has the sequence of SEQ ID NO:28, BoPAG6 has the sequence of SEQ ID NO:29, BoPAG7 has the sequence of SEQ ID NO:30, BoPAG9 has the sequence of SEQ ID NO:32, BoPAG 7v has the sequence of SEQ ID NO:40; BoPAG9v has the sequence of SEQ ID NO:42; BoPAG 15 has the sequence of SEQ ID NO:44; BoPAG 16 has the sequence of SEQ ID NO:46; BoPAG 17 has the sequence of SEQ ID NO:48; BoPAG 18 has the sequence of SEQ ID NO:50;

BoPAG 19 has the sequence of SEQ ID NO:52; BoPAG 20 has the sequence of SEQ ID NO:54 and BoPAG 21 has the sequence of SEQ ID NO:56 with polyclonal antisera.

183.   The method of claim 11, wherein BoPAG2 has the sequence of SEQ ID NO:25, BoPAG4 has the sequence of SEQ ID NO:27, BoPAG5 has the sequence of SEQ ID NO:28, BoPAG6 has the sequence of SEQ ID NO:29, BoPAG7 has the sequence of SEQ ID NO:30, BoPAG9 has the sequence of SEQ ID NO:32, BoPAG 7v has the sequence of SEQ ID NO:40; BoPAG9v has the sequence of SEQ ID NO:42; BoPAG 15 has the sequence of SEQ ID NO:44; BoPAG 16 has the sequence of SEQ ID NO:46; BoPAG 17 has the sequence of SEQ ID NO:48; BoPAG 18 has the sequence of SEQ ID NO:50; BoPAG 19 has the sequence of SEQ ID NO:52; BoPAG 20 has the sequence of SEQ ID NO:54 and BoPAG 21 has the sequence of SEQ ID NO:56 with a monoclonal antibody preparation.